7 **In this question you must show detailed reasoning.**

A circle C passes through the point $(2, 1)$ and has an equation which satisfies the differential equation

$$\frac{dy}{dx} = \frac{k-x}{y+4}$$

where k is a constant.

You are given that the radius of C is at least 13 units.

Find the set of possible values of k. Give your answer in set notation. **[8]**